

isc N-Channel MOSFET Transistor

STP6N80K5

• FEATURES

- Static drain-source on-resistance:
 $R_{DS(on)} \leq 1.6\Omega$
- Enhancement mode
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

• DESCRIPTION

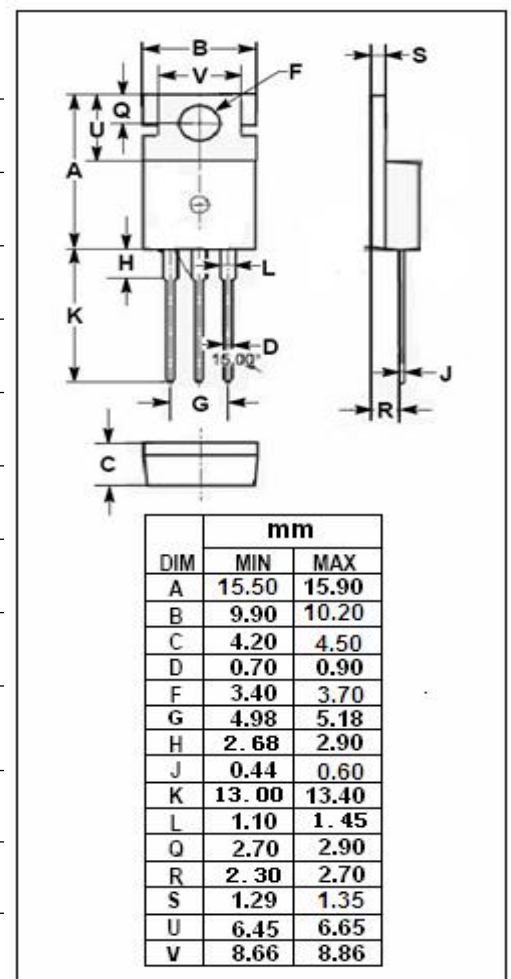
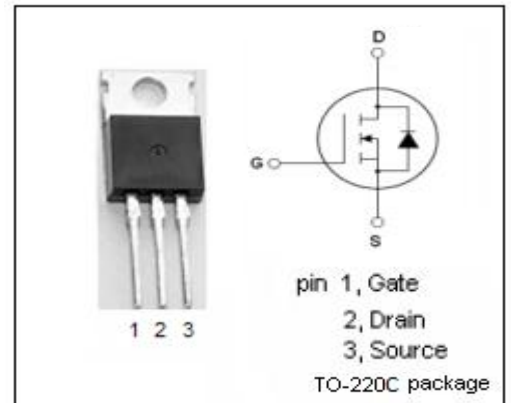
- Be suitable for synchronous rectification for server and general purpose applications

• ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{DSS}	Drain-Source Voltage	800	V
V_{GS}	Gate-Source Voltage	± 30	V
I_D	Drain Current-Continuous	4.5	A
I_{DM}	Drain Current-Single Pulsed	18	A
P_D	Total Dissipation @ $T_c=25^\circ\text{C}$	85	W
T_j	Max. Operating Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature	-55~150	$^\circ\text{C}$

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	1.47	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62.5	$^\circ\text{C/W}$



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ELECTRICAL CHARACTERISTICS

T_C=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V; I _D =1mA	800			V
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} ; I _D =100 μ A	3		5	V
R _{DS(on)}	Drain-Source On-Resistance	V _{GS} =10V; I _D =2A			1.6	Ω
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V; V _{DS} =0V			±10	μ A
I _{DSS}	Drain-Source Leakage Current	V _{DS} =800V; V _{GS} = 0V			1	μ A
		V _{DS} =800V; V _{GS} = 0V; T _J = 125°C			50	
V _{SD}	Diode forward voltage	I _S =4.5A; V _{GS} = 0V			1.5	V

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